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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/775,451	02/10/2004	Nicholas DeMarco	012365-9011-01	9421
23409 7590 12/19/2006 MICHAEL BEST & FRIEDRICH, LLP 100 E WISCONSIN AVENUE MILWAUKEE, WI 53202			EXAMINER THERKORN, ERNEST G	
			ART UNIT	PAPER NUMBER
			1723	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		12/19/2006	PAPER	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

## Office Action Summary

Application No.

10/775,451

Applicant(s)

DEMARCO, NICHOLAS

Examiner

Ernest G. Therkorn

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 24 November 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-42 is/are pending in the application.
- 4a) Of the above claim(s) 8, 11-21 and 29-42 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7, 9, 10 and 22-28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

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The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-7, 9-10, and 22-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over either Yamada (U.S. Patent No. 5,693,223) or Nakaso (U.S. Patent No. 5,360,544) in view of Lacy (U.S. Patent No. 6,280,619) and Fritze (U.S. Patent No. 6,953,526). At best, the claims differ from either Yamada (U.S. Patent No. 5,693,223) or Nakaso (U.S. Patent No. 5,360,544) in reciting use of a fused plug. Lacy (U.S. Patent No. 6,280,619) (column 3, lines 47-57) discloses spin welding a cap to the cartridge to "meld their adjacent surfaces together" for the obvious purpose of preventing leaking. Fritze (U.S. Patent No. 6,953,526) (column 1, lines 52-56) confirms spin welding minimizes leaks. It would have been obvious to spin weld in either Yamada (U.S. Patent No. 5,693,223) or Nakaso (U.S. Patent No. 5,360,544) because Lacy (U.S. Patent No. 6,280,619) (column 3, lines 47-57) discloses spin welding a cap to the cartridge to "meld their adjacent surfaces together" for the obvious purpose of

preventing leaking and Fritze (U.S. Patent No. 6,953,526) (column 1, lines 52-56) confirms spin welding minimizes leaks.

Claims 7 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over either Yamada (U.S. Patent No. 5,693,223) or Nakaso (U.S. Patent No. 5,360,544) in view of Lacy (U.S. Patent No. 6,280,619) and Fritze (U.S. Patent No. 6,953,526) as applied to claims 1-7, 9-10, and 22-28 above, and further in view of Goss (U.S. Patent No. 6,454,891). At best, the claims differ from either Yamada (U.S. Patent No. 5,693,223) or Nakaso (U.S. Patent No. 5,360,544) in view of Lacy (U.S. Patent No. 6,280,619) and Fritze (U.S. Patent No. 6,953,526) in reciting use of a bore. Goss (U.S. Patent No. 6,454,891) (Abstract, lines 1-14) discloses that a bore allows attachment to a drive means for spin welding. It would have been obvious to have a bore in either Yamada (U.S. Patent No. 5,693,223) or Nakaso (U.S. Patent No. 5,360,544) in view of Lacy (U.S. Patent No. 6,280,619) and Fritze (U.S. Patent No. 6,953,526) because Goss (U.S. Patent No. 6,454,891) (Abstract, lines 1-14) discloses that a bore allows attachment to a drive means for spin welding.

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over either Yamada (U.S. Patent No. 5,693,223) or Nakaso (U.S. Patent No. 5,360,544) in view of Lacy (U.S. Patent No. 6,280,619) and Fritze (U.S. Patent No. 6,953,526) as applied to claims 1-7, 9-10, and 22-28 above, and further in view of Hou (U.S. Patent No. 5,089,654). At best, the claim differs from either Yamada (U.S. Patent No. 5,693,223) or Nakaso (U.S. Patent No. 5,360,544) in view of Lacy (U.S. Patent No. 6,280,619) and Fritze (U.S. Patent No. 6,953,526) in reciting use of a cover. Hou (U.S. Patent No.

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5,089,654) (column 45, lines 3-5) discloses that use of a protective cap (cover) protects the inlet and outlet. It would have been obvious to use a cover in either Yamada (U.S. Patent No. 5,693,223) or Nakaso (U.S. Patent No. 5,360,544) in view of Lacy (U.S. Patent No. 6,280,619) and Fritze (U.S. Patent No. 6,953,526) because Hou (U.S. Patent No. 5,089,654) (column 45, lines 3-5) discloses that use of a protective cap (cover) protects the inlet and outlet.

Claims 1-7, 9-10, and 22-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over either Yamada (U.S. Patent No. 5,693,223) or Nakaso (U.S. Patent No. 5,360,544) in view of Reid (U.S. Patent No. 4,626,350), Lacy (U.S. Patent No. 6,280,619) and Fritze (U.S. Patent No. 6,953,526). At best, the claims differ from either Yamada (U.S. Patent No. 5,693,223) or Nakaso (U.S. Patent No. 5,360,544) in reciting use of fused plugs on both ends of the column. Reid (U.S. Patent No. 4,626,350) (column 2, lines 40-45 and column 5, lines 53-58) discloses that use of spin welding end caps in a process results in an improved cartridge which minimizes production costs and simplifies filling procedures. Lacy (U.S. Patent No. 6,280,619) (column 3, lines 47-57) discloses spin welding a cap to the cartridge to "meld their adjacent surfaces together" for the obvious purpose of preventing leaking. Fritze (U.S. Patent No. 6,953,526) (column 1, lines 52-56) confirms spin welding minimizes leaks. It would have been obvious to use fused plugs on both ends of the column because Reid (U.S. Patent No. 4,626,350) (column 2, lines 40-45 and column 5, lines 53-58) discloses that use of spin welding end caps in a process results in an improved cartridge which minimizes production costs and simplifies filling procedures. It would have been

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obvious to spin weld in either Yamada (U.S. Patent No. 5,693,223) or Nakaso (U.S. Patent No. 5,360,544) because Lacy (U.S. Patent No. 6,280,619) (column 3, lines 47-57) discloses spin welding a cap to the cartridge to "meld their adjacent surfaces together" for the obvious purpose of preventing leaking and Fritze (U.S. Patent No. 6,953,526) (column 1, lines 52-56) confirms spin welding minimizes leaks.

Claims 7 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over either Yamada (U.S. Patent No. 5,693,223) or Nakaso (U.S. Patent No. 5,360,544) in view of Reid (U.S. Patent No. 4,626,350), Lacy (U.S. Patent No. 6,280,619) and Fritze (U.S. Patent No. 6,953,526) as applied to claims 1-7, 9-10, and 22-28 above, and further in view of Goss (U.S. Patent No. 6,454,891). At best, the claims differ from either Yamada (U.S. Patent No. 5,693,223) or Nakaso (U.S. Patent No. 5,360,544) in view of Reid (U.S. Patent No. 4,626,350), Lacy (U.S. Patent No. 6,280,619) and Fritze (U.S. Patent No. 6,953,526) in reciting use of a bore. Goss (U.S. Patent No. 6,454,891) (Abstract, lines 1-14) discloses that a bore allows attachment to a drive means for spin welding. It would have been obvious to have a bore in either Yamada (U.S. Patent No. 5,693,223) or Nakaso (U.S. Patent No. 5,360,544) in view of Reid (U.S. Patent No. 4,626,350), Lacy (U.S. Patent No. 6,280,619) and Fritze (U.S. Patent No. 6,953,526) because Goss (U.S. Patent No. 6,454,891) (Abstract, lines 1-14) discloses that a bore allows attachment to a drive means for spin welding.

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over either Yamada (U.S. Patent No. 5,693,223) or Nakaso (U.S. Patent No. 5,360,544) in view of Reid (U.S. Patent No. 4,626,350), Lacy (U.S. Patent No. 6,280,619) and Fritze (U.S.

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Patent No. 6,953,526) as applied to claims 1-7, 9-10, and 22-28 above, and further in view of Hou (U.S. Patent No. 5,089,654). At best, the claim differs from either Yamada (U.S. Patent No. 5,693,223) or Nakaso (U.S. Patent No. 5,360,544) in view of Reid (U.S. Patent No. 4,626,350), Lacy (U.S. Patent No. 6,280,619) and Fritze (U.S. Patent No. 6,953,526) in reciting use of a cover. Hou (U.S. Patent No. 5,089,654) (column 45, lines 3-5) discloses that use of a protective cap (cover) protects the inlet and outlet. It would have been obvious to use a cover in either Yamada (U.S. Patent No. 5,693,223) or Nakaso (U.S. Patent No. 5,360,544) in view of Reid (U.S. Patent No. 4,626,350), Lacy (U.S. Patent No. 6,280,619) and Fritze (U.S. Patent No. 6,953,526) because Hou (U.S. Patent No. 5,089,654) (column 45, lines 3-5) discloses that use of a protective cap (cover) protects the inlet and outlet.

Claims 1-7, 9-10, and 22-28 are rejected under 35 U.S.C. 102(B) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Hou (U.S. Patent No. 5,089,654). The claims are considered to read on Hou (U.S. Patent No. 5,089,654). However, if a difference exists between the claims and Hou (U.S. Patent No. 5,089,654), it would reside in optimizing the elements of Hou (U.S. Patent No. 5,089,654). It would have been obvious to optimize the elements of Hou (U.S. Patent No. 5,089,654) to enhance separation.

Claims 1-7, 9-10, and 22-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hou (U.S. Patent No. 5,089,654) in view of Lacy (U.S. Patent No. 6,280,619) and Fritze (U.S. Patent No. 6,953,526). At best, the claims differ from Hou (U.S. Patent No. 5,089,654) in reciting use of a fused plug. Lacy (U.S. Patent No.

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6,280,619) (column 3, lines 47-57) discloses spin welding a cap to the cartridge to "meld their adjacent surfaces together" for the obvious purpose of preventing leaking. Fritze (U.S. Patent No. 6,953,526) (column 1, lines 52-56) confirms spin welding minimizes leaks. It would have been obvious to spin weld in Hou (U.S. Patent No. 5,089,654) because Lacy (U.S. Patent No. 6,280,619) (column 3, lines 47-57) discloses spin welding a cap to the cartridge to "meld their adjacent surfaces together" for the obvious purpose of preventing leaking and Fritze (U.S. Patent No. 6,953,526) (column 1, lines 52-56) confirms spin welding minimizes leaks.

Claims 7 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over either Hou (U.S. Patent No. 5,089,654) alone or Hou (U.S. Patent No. 5,089,654) in view of Lacy (U.S. Patent No. 6,280,619) and Fritze (U.S. Patent No. 6,953,526) as applied to claims 1-7, 9-10, and 22-28 above, and further in view of Goss (U.S. Patent No. 6,454,891). At best, the claims differ from either Hou (U.S. Patent No. 5,089,654) alone or Hou (U.S. Patent No. 5,089,654) in view of Lacy (U.S. Patent No. 6,280,619) and Fritze (U.S. Patent No. 6,953,526) in reciting use of a bore. Goss (U.S. Patent No. 6,454,891) (Abstract, lines 1-14) discloses that a bore allows attachment to a drive means for spin welding. It would have been obvious to have a bore in either Hou (U.S. Patent No. 5,089,654) alone or Hou (U.S. Patent No. 5,089,654) in view of Lacy (U.S. Patent No. 6,280,619) and Fritze (U.S. Patent No. 6,953,526) because Goss (U.S. Patent No. 6,454,891) (Abstract, lines 1-14) discloses that a bore allows attachment to a drive means for spin welding.



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Claims 1-7, 9-10, and 22-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hou (U.S. Patent No. 5,089,654) in view of Reid (U.S. Patent No. 4,626,350). At best, the claims differ from Hou (U.S. Patent No. 5,089,654) in reciting use of fused plugs on both ends of the column. Reid (U.S. Patent No. 4,626,350) (column 2, lines 40-45 and column 5, lines 53-58) discloses that use of spin welding end caps in a process results in an improved cartridge which minimizes production costs and simplifies filling procedures. It would have been obvious to use fused plugs on both ends of the column because Reid (U.S. Patent No. 4,626,350) (column 2, lines 40-45 and column 5, lines 53-58) discloses that use of spin welding end caps in a process results in an improved cartridge which minimizes production costs and simplifies filling procedures.

Claims 1-7, 9-10, and 22-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hou (U.S. Patent No. 5,089,654) in view of Reid (U.S. Patent No. 4,626,350), Lacy (U.S. Patent No. 6,280,619), and Fritze (U.S. Patent No. 6,953,526). At best, the claims differ from Hou (U.S. Patent No. 5,089,654) in reciting use of a fused plug. Reid (U.S. Patent No. 4,626,350) (column 2, lines 40-45 and column 5, lines 53-58) discloses that use of spin welding end caps in a process results in an improved cartridge which minimizes production costs and simplifies filling procedures. Lacy (U.S. Patent No. 6,280,619) (column 3, lines 47-57) discloses spin welding a cap to the cartridge to "meld their adjacent surfaces together" for the obvious purpose of preventing leaking. Fritze (U.S. Patent No. 6,953,526) (column 1, lines 52-56) confirms spin welding minimizes leaks. It would have been obvious to use fused plugs on both

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ends of the column because Reid (U.S. Patent No. 4,626,350) (column 2, lines 40-45 and column 5, lines 53-58) discloses that use of spin welding end caps in a process results in an improved cartridge which minimizes production costs and simplifies filling procedures. It would have been obvious to spin weld in Hou (U.S. Patent No. 5,089,654) because Lacy (U.S. Patent No. 6,280,619) (column 3, lines 47-57) discloses spin welding a cap to the cartridge to "meld their adjacent surfaces together" for the obvious purpose of preventing leaking and Fritze (U.S. Patent No. 6,953,526) (column 1, lines 52-56) confirms spin welding minimizes leaks.

Claims 7 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over either Hou (U.S. Patent No. 5,089,654) in view of Reid (U.S. Patent No. 4,626,350) alone or Hou (U.S. Patent No. 5,089,654) in view of Reid (U.S. Patent No. 4,626,350), Lacy (U.S. Patent No. 6,280,619), and Fritze (U.S. Patent No. 6,953,526) as applied to claims 1-7, 9-10, and 22-28 above, and further in view of Goss (U.S. Patent No. 6,454,891). At best, the claims differ from either Hou (U.S. Patent No. 5,089,654) in view of Reid (U.S. Patent No. 4,626,350) alone or Hou (U.S. Patent No. 5,089,654) in view of Reid (U.S. Patent No. 4,626,350), Lacy (U.S. Patent No. 6,280,619), and Fritze (U.S. Patent No. 6,953,526) in reciting use of a bore. Goss (U.S. Patent No. 6,454,891) (Abstract, lines 1-14) discloses that a bore allows attachment to a drive means for spin welding. It would have been obvious to have a bore in either Hou (U.S. Patent No. 5,089,654) in view of Reid (U.S. Patent No. 4,626,350) alone or Hou (U.S. Patent No. 5,089,654) in view of Reid (U.S. Patent No. 4,626,350), Lacy (U.S. Patent No. 6,280,619), and Fritze (U.S. Patent No. 6,953,526) because Goss (U.S. Patent No.

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6,454,891) (Abstract, lines 1-14) discloses that a bore allows attachment to a drive means for spin welding.

Claims 1-7, 9-10, and 22-28 are rejected under 35 U.S.C. 102(B) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Reid (U.S. Patent No. 4,626,350). The claims are considered to read on Reid (U.S. Patent No. 4,626,350). However, if a difference exists between the claims and Reid (U.S. Patent No. 4,626,350), it would reside in optimizing the elements of Reid (U.S. Patent No. 4,626,350). It would have been obvious to optimize the elements of Reid (U.S. Patent No. 4,626,350) to enhance separation.

Claims 7 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reid (U.S. Patent No. 4,626,350) as applied to claims 1-7, 9-10, and 22-28 above, and further in view of Goss (U.S. Patent No. 6,454,891). At best, the claims differ from Reid (U.S. Patent No. 4,626,350) in reciting use of a bore. Goss (U.S. Patent No. 6,454,891) (Abstract, lines 1-14) discloses that a bore allows attachment to a drive means for spin welding. It would have been obvious to have a bore in Reid (U.S. Patent No. 4,626,350) because Goss (U.S. Patent No. 6,454,891) (Abstract, lines 1-14) discloses that a bore allows attachment to a drive means for spin welding.

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Reid (U.S. Patent No. 4,626,350) as applied to claims 1-7, 9-10, and 22-28 above, and further in view of Hou (U.S. Patent No. 5,089,654). At best, the claim differs from Reid (U.S. Patent No. 4,626,350) in reciting use of a cover. Hou (U.S. Patent No. 5,089,654) (column 45, lines 3-5) discloses that use of a protective cap (cover) protects the inlet

and outlet. It would have been obvious to use a cover in Reid (U.S. Patent No. 4,626,350) because Hou (U.S. Patent No. 5,089,654) (column 45, lines 3-5) discloses that use of a protective cap (cover) protects the inlet and outlet.

Claims 22-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reid (U.S. Patent No. 4,626,350) as applied to claims 1-7, 9-10, and 22-28 above, and further in view of Snyder (Introduction to Modern Liquid Chromatography, John Wiley, New York, 1979, pages 21-22 and 410-414). At best, the claims differ from Reid (U.S. Patent No. 4,626,350) in reciting that Reid (U.S. Patent No. 4,626,350)'s column 1, line 18's ion exchange resins are a chromatography medium. Snyder (Introduction to Modern Liquid Chromatography, John Wiley, New York, 1979, pages 21-22 and 410-414) discloses that ion exchange chromatography is one of four major branches of chromatography. It would have been obvious that Reid (U.S. Patent No. 4,626,350)'s column 1, line 18's ion exchange resins are a chromatography medium because Snyder (Introduction to Modern Liquid Chromatography, John Wiley, New York, 1979, pages 21-22 and 410-414) discloses that ion exchange chromatography is one of four major branches of chromatography.

Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Reid (U.S. Patent No. 4,626,350) in view of Snyder (Introduction to Modern Liquid Chromatography, John Wiley, New York, 1979, pages 21-22 and 410-414) as applied to claims 22-28 above, and further in view of Goss (U.S. Patent No. 6,454,891). At best, the claim differs from Reid (U.S. Patent No. 4,626,350) in view of Snyder (Introduction to Modern Liquid Chromatography, John Wiley, New York, 1979, pages 21-22 and 410-

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414) in reciting use of a bore. Goss (U.S. Patent No. 6,454,891) (Abstract, lines 1-14) discloses that a bore allows attachment to a drive means for spin welding. It would have been obvious to have a bore in Reid (U.S. Patent No. 4,626,350) in view of Snyder (Introduction to Modern Liquid Chromatography, John Wiley, New York, 1979, pages 21-22 and 410-414) because Goss (U.S. Patent No. 6,454,891) (Abstract, lines 1-14) discloses that a bore allows attachment to a drive means for spin welding.

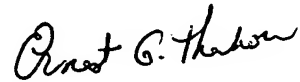
The remarks urge patentability based upon use of fused plugs on both ends of the columns. If a structural difference exists between the claims and the primary references based upon fusing, Reid (U.S. Patent No. 4,626,350) (column 2, lines 40-45 and column 5, lines 53-58) discloses that use of spin welding end caps in a process results in an improved cartridge which minimizes production costs and simplifies filling procedures. As such, it would have been obvious to use fused plugs on both ends of the columns of the primary references because Reid (U.S. Patent No. 4,626,350) (column 2, lines 40-45 and column 5, lines 53-58) discloses that use of spin welding end caps in a process results in an improved cartridge which minimizes production costs and simplifies filling procedures.

Any inquiry concerning this communication should be directed to E. Therkorn at telephone number (571) 272-1149. The official fax number is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

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For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



**Ernest G. Therkorn**  
**Primary Examiner**  
**Art Unit 1723**

EGT  
December 15, 2006